

### **LISTING OF THE CLAIMS**

1. (Currently Amended) A method that maps any input color from an image to an output color, the method using a two-dimensional lookup table that contains mapping for a portion of the colors of the image and using color information associated with an input color from the image, the method comprising:

determining mapping information for table entries nearest to an input color; and

interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color, wherein interpolating said mapping information for the nearest table entries comprises:

determining mapping information of a first table entry corresponding to a color represented by the lookup table and closest to the input color;

determining mapping information of a second table entry a table entry away from the first table entry in a first direction in the lookup table;

determining mapping information of a third table entry a table entry away from the first table entry in a second direction in the lookup table;

determining mapping information of a fourth table entry a table entry away from the third table entry in a first direction in the lookup table; and

wherein the input color is located between the nearest table entries.

2. (Cancelled)

3. (Original) The method according to claim 1 wherein the mapping information of a table entry comprises color information associated with the table entry and a mapping condition associated with the table entry.

4. (Previously Presented) The method according to claim 3 wherein the mapping condition indicates whether the color information associated with the table entry is to be used when the mapping condition is asserted.

5. (Previously Presented) The method according to claim 4 wherein the mapping condition indicates whether the color information of the input color is to be used when the mapping condition is not asserted.

6. (Previously Presented) The method according to claim 5 wherein the color information of the input color is output without performing any mapping when the mapping condition is not asserted.

7. (Original) The method according to claim 6 wherein the brightness of the input color is mapped to an output brightness using brightness information of the table entries when the color information of the input color is output without performing any mapping.

8. (Currently Amended) The method according to claim 1 ~~2~~ wherein the four nearest table entries are used to map the color of the input color.

9. (Currently Amended) The method according to claim 1 ~~2~~ wherein two or one nearest table entries are used to map the color of the input color when the input color is near an edge of the look up table.

10. (Currently Amended) A system that maps any input color from an image to an output color, the system comprising:

a two-dimensional lookup table that contains mapping for a portion of the colors of the image; and

at least one processor capable of determining mapping information for table entries nearest to an input color, the at least one processor capable of interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color, wherein determining mapping information for the nearest table entries comprises:

determining mapping information of a first table entry corresponding to a color represented by the lookup table and closest to the input color;

determining mapping information of a second table entry a table entry away from the first table entry in a first direction in the lookup table;

determining mapping information of a third table entry a table entry away from the first table entry in a second direction in the lookup table;

determining mapping information of a fourth table entry a table entry away from the third table entry in a first direction in the lookup table; and

wherein the input color is located between the nearest table entries.

11. (Cancelled)

12. (Original) The system according to claim 10 wherein the mapping information of a table entry comprises color information associated with the table entry and a mapping condition associated with the table entry.

13. (Original) The system according to claim 12 wherein the mapping condition indicates the color information associated with the table entry is to be used when the mapping condition is asserted.

14. (Original) The system according to claim 13 wherein the mapping condition indicates the color information of the input color is to be used when the mapping condition is not asserted.

15. (Original) The system according to claim 14 wherein the color information of the input color is output without performing any mapping when the mapping condition is not asserted for all the nearest table entries.

16. (Original) The system according to claim 15 wherein the brightness of the input color is mapped to an output brightness when the color information of the input color is output without performing any mapping.

17. (Currently Amended) The system according to claim 10 ~~11~~ wherein the four nearest table entries are used to map the color of the input color.

18. (Original) The system according to claim 10 ~~11~~ wherein two or one nearest table entries are used to map the color of the input color when the input color is near an edge of the look up table.

19. (Previously Presented) A computer-readable medium having stored thereon, a computer program having at least one code section that maps any input color from an image to an output color using a two-dimensional lookup table that contains mapping for a portion of the colors of the image and using color information associated with an input color from the image, the at least one code section being executable by a computer for causing the computer to perform steps comprising:

determining mapping information for table entries nearest to an input color; and  
interpolating the mapping information for the nearest table entries to obtain color  
information for an output color corresponding to the input color; and

wherein the code for determining mapping information for the nearest table entries  
comprises:

code for determining mapping information of a first table entry corresponding to a color  
represented by the lookup table and closest to the input color;

code for determining mapping information of a second table entry a table entry away  
from the first table entry in a first direction in the lookup table;

code for determining mapping information of a third table entry a table entry away from  
the first table entry in a second direction in the lookup table;

code for determining mapping information of a fourth table entry a table entry away from  
the third table entry in a first direction in the lookup table; and

wherein the input color is located between the nearest table entries.

20. (Cancelled)

21. (Previously Presented) The computer-readable medium according to claim 19  
wherein the mapping information of a table entry comprises color information associated with  
the table entry and a mapping condition associated with the table entry.

22. (Previously Presented) The computer-readable medium according to claim 21  
wherein the mapping condition indicates the color information associated with the table entry is  
to be used when the mapping condition is asserted.

23. (Previously Presented) The computer-readable medium according to claim 22 wherein the mapping condition indicates the color information of the input color is to be used when the mapping condition is not asserted.

24. (Previously Presented) The computer-readable medium according to claim 23 wherein the color information of the input color is output without performing any mapping when the mapping condition is not asserted for all the nearest table entries.

25. (Previously Presented) The computer-readable medium according to claim 24 wherein the brightness of the input color is mapped to an output brightness using brightness information of the table entries when the color information of the input color is output without performing any mapping.

26. (Previously Presented) The computer-readable medium according to claim 19 ~~20~~ wherein the four nearest table entries are used to map the color of the input color.

27. (Previously Presented) The computer-readable medium according to claim 19 ~~20~~ wherein two or one nearest table entries are used to map the color of the input color when the input color is near an edge of the look up table.

28-35. (Cancelled).